IN THE CLAIMS:

Please note that all claims that are currently pending and under consideration in the above-referenced application are shown below, in clean form, for clarity. A marked-up version of each amended claim is enclosed herewith to clearly identify the changes that have been made to each claim. Claims 1, 4, 18, 21, 29, and 32 have been amended. Claim 38 has been canceled.

Please amend the claims as follows:

1. (Twice Amended) A mold apparatus for forming at least one metal bump for direct placement on bond pads on a secondary substrate, comprising:

a substrate having a surface;

at least one cavity formed in said surface of said substrate, said cavity having substantially the same dimensions as the at least one metal bump; and

a nonstick protective layer applied to said at least one cavity.

2. (Previously Amended) The mold apparatus according to claim 1, wherein said nonstick protective layer is a silicon oxide layer.

3. (Previously Amended) The mold apparatus according to claim 1, wherein said nonstick protective layer is a silicon nitride layer.

4. (Twice Amended) The mold apparatus according to claim 1, wherein said nonstick protective layer comprises means for preventing a metal material from adhering to said at least one cavity.

5. The mold apparatus according to claim 4, wherein said metal material is a solder paste comprising lead and nickel.

6. The mold apparatus according to claim 1, wherein said at least one cavity has a depth in said surface of said substrate of about 28 micrometers.

7. (Previously Amended) The mold apparatus according to claim 1, wherein said nonstick protective layer has a thickness ranging from about 200 Angstroms to 5 micrometers.

8. The mold apparatus according to claim 1, wherein said at least one cavity has a trapezoidal shape.

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9. The mold apparatus according to claim 1, wherein said at least one cavity has a hemispherical shape.

10. The mold apparatus according to claim 1, wherein said at least one cavity has a rectangular shape.

11. The mold apparatus according to claim 1, wherein said at least one cavity has a square shape.

12. The mold apparatus according to claim 1, further comprising:
at least one heating strip located on another surface of said substrate.

13. The mold apparatus according to claim 1, further comprising:
a plurality of heating strips located on another surface of said substrate.

14. The mold apparatus according to claim 12, further comprising:
an electrical conductor connected to a portion of the at least one heating strip.

15. The mold apparatus according to claim 13, further comprising:
an electrical conductor connected to a portion of the plurality of heating strips.

16. The mold apparatus according to claim 1, wherein said substrate comprises semiconductor material.

17. The mold apparatus according to claim 1, wherein said substrate comprises ceramic material.

18. (Twice Amended) A solder mold apparatus for forming at least one metal bump for direct placement on a corresponding bond pad on a secondary substrate, comprising:
a substrate having a surface;
at least one cavity formed in said surface of said substrate, said cavity having substantially the same dimensions as the at least one metal bump;
a nonstick protective layer applied to said at least one cavity; and
a metal paste applicator.

19. (Previously Amended) The solder mold apparatus according to claim 18, wherein said nonstick protective layer is a silicon oxide layer.

20. (Previously Amended) The solder mold apparatus according to claim 18, wherein said nonstick protective layer is a silicon nitride layer.

21. (Twice Amended) The solder mold apparatus according to claim 18, wherein said nonstick protective layer comprises means for preventing a metal material from adhering to said at least one cavity.

22. The solder mold apparatus according to claim 21, wherein said metal material is a solder paste comprising lead and nickel.

23. The solder mold apparatus according to claim 22, further comprising a metal paste dispenser, coupled to said metal paste applicator, to place a metal paste on said substrate.

24. The solder mold apparatus according to claim 23, further comprising a heating element to melt said metal paste to form a contact for application to said secondary substrate.

25. The solder mold apparatus according to claim 18, wherein said at least one cavity has a depth in said surface of said substrate of about 28 micrometers.

26. (Previously Amended) The solder mold apparatus according to claim 18, wherein said nonstick protective layer has a thickness ranging from above 200 Angstroms to 5 micrometers.

27. The solder mold apparatus according to claim 18, wherein said substrate comprises semiconductor material.

28. The solder mold apparatus according to claim 18, wherein said substrate comprises a ceramic material.

29. (Twice Amended) A mold apparatus for forming at least one metal bump with a width and a length for direct placement on bond pads on a secondary substrate, comprising:

a substrate having a surface;

at least one cavity formed in said surface of said substrate, said at least one cavity having a selected width and a selected length in said surface, said selected width and said selected

length being substantially the same as said width and length of the at least one metal bump; and

a nonstick protective layer applied to said at least one cavity.

30. (Previously Amended) The mold apparatus according to claim 29, wherein said nonstick protective layer is a silicon oxide layer.

31. (Previously Amended) The mold apparatus according to claim 29, wherein said nonstick protective layer is a silicon nitride layer.

32. (Twice Amended) The mold apparatus according to claim 29, wherein said nonstick protective layer comprises means for preventing a metal material from adhering to said at least one cavity.

33. The mold apparatus according to claim 32, wherein said metal material is a solder paste comprising lead and nickel.

34. The mold apparatus according to claim 29, wherein said at least one cavity has a depth in said surface of said substrate of about 28 micrometers.

35. (Previously Amended) The mold apparatus according to claim 29, wherein said nonstick protective layer has a thickness ranging from about 200 Angstroms to 5 micrometers.

36. The mold apparatus according to claim 29, wherein said selected width and said selected length are substantially the same.

37. The mold apparatus according to claim 29, wherein said selected width is smaller than said selected length.

39. The mold apparatus according to claim 29, further comprising:
at least one heating strip located on another surface of said substrate.

40. The mold apparatus according to claim 29, further comprising:
a plurality of heating strips located on another surface of said substrate.

41. The mold apparatus according to claim 29, wherein said substrate comprises semiconductor material.